

NPIC/TSSG/RED-1761-69  
14 August 1969

MEMORANDUM TO: Executive Director, National Photographic Interpretation Center

THROUGH : Chief, Research & Engineering Division, TSSG  
          Chief, Technical Services & Support Group

SUBJECT : Executive Director's 2 July 1969 Memorandum Entitled  
          "Perception"

1. I regret the delay in responding to the referenced memorandum. I very recently obtained a copy of Dr. Alfred Kleyhauer's paper "A Study of Visual Semantic Thresholds," and then only because of superb "leg work" by the Center's Library personnel. Just how this was accomplished is an intriguing story unto itself but quite apart from the specific topic of perception research, and thus relegated to a future agenda.

25X1 2. I have carefully reviewed the Kleyhauer article, which was presented [redacted] several years ago. I consider it to be a reasonably professional treatise on rather well-publicized brain neurophysiology, but only tangentially related to the topic implied by the title and even less relevant to the Center's more immediate "perceptual" problems.

3. Among the defects of the paper, which were several, one line of reasoning was conspicuous by its presence and another by its absence. The paper makes an attempt to objectively define, and even pinpoint, the neural locus, as well as the electrophysiological and biochemical characteristics, of several rather nebulous "psychological" constructs such as conscious awareness, unconscious sensation, and the mind. It should be noted that the original investigators [redacted] and others) were measurably more conservative in their pronouncements regarding such matters. I am willing to go along with Dr. Kleyhauer's definitions, given that he is an optometrist talking to other optometrists, but I do admit that such metaphysical discourse does not sit well with my psychophysical background. I am much more willing to view the problem of visual perception as do Evans (The Conceptual Basis of Schema Theory) and Gregory (Seeing), who manipulate objectively observable behavior in controlled situations. Copies of the referenced papers are attached for your convenience.

4. Your interest in Kleyhauer's paper appears to me as an expression of concern for research several steps more complex than neurophysiology and biochemistry, that is, basic research in perception. I am obviously pleased in your taking time to alert me to your concern.

SECRET

SUBJECT: Executive Director's 2 July 1969 Memorandum Entitled "Perception"

5. You asked to be informed as to what our research has thus far accomplished in "...proving or disproving (Kleyhauer's) philosophical exposition" and "...bringing perception to our PI's and enhancing it." Gregory (see p. 8, attachment) has summarized what for me lies at the very foundation of the Center's PI Process Research Program.

"The seeing of objects involves many sources of information beyond those meeting the eye when we look at an object. It generally involves knowledge of the object derived from previous experience (but see Evans, pp. 9-10), and this experience is not limited to vision but may include the other senses; touch, taste, smell, hearing, and perhaps also temperature or pain. Objects are far more than patterns of stimulation: Objects have pasts and future; when we know its past or can guess its future, an object transcends experience and becomes an embodiment of knowledge and expectation without which life of even the simplest kind is impossible."

It is our goal to more fully understand what it is that each interpreter brings with him when he assumes the role of a PI.

6. To date, we have addressed this problem by systematically demonstrating and identifying individual and group differences in PI ability. This has necessitated the development of PI achievement tests, an effort that must continue if we are to remain sincere in working toward an eventual improvement in our exploitation process. On the basis of such test results, we have turned to questioning the "why" of such individual differences. For example, Agency aptitude test scores and biographical information (PAT-B) have been correlated with several PI achievement scores, with results that were mildly encouraging. No, we could not predict PI ability with PAT-B information to any great extent, but there certainly was the suggestion that additional work in the area of test development was in order. I, therefore, requested, and was granted, permission to undertake the development of a test battery that hopefully will predict PI proficiency. This effort is barely off the ground, but we have already concluded that "perceptual" tests should be supplemented by some rather basic "motivational" indicants. Moreover, there appears to be a need for visual-perceptual test stimuli that will tap the root of "pattern perception" without clouding the issue by utilizing aerial photographs. I am reasonably familiar with the work of Evans, whom I hold in very high esteem when it comes to pattern perception, and I recommend that the Center make arrangements to talk with him about the possibility of assisting our PI Process Research Program.

SECRET

SECRET

SUBJECT: Executive Director's 2 July 1969 Memorandum Entitled "Perception"

7. I would be pleased to further discuss "perception" at your convenience.

ATB/RED/TSSG

25X1

Attachments:

1. Seeing
2. The Conceptual Basis of Schema Theory
3. A Study of Visual Semantic Thresholds

Distribution:

- Orig - Addressee w/atts 1 thru 3
- 1 - TSSG w/o atts
  - 1 - TSSG/RED w/o atts
  - 2 - TSSG/RED/ATB w/o atts

SECRET